Linnaeus and his two Circumnavigating Apostles

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If you visit Linnaeus's house in Uppsala and ascend to the floor where his study remains with most of the furniture intact, you will see on a high glass cupboard a globe of the world made in Akerman's famous workshop in Uppsala in the middle of the 18th century (Fig. 1). The globe shows with surprising accuracy the continents in broad outline but we can imagine that Linnaeus looked with curiosity and fascination at the arbitrary, dotted contour that runs along the eastern side of Nova Hollandia up to Nova Guinea (Fig. 2), across the strait said to have been kept secret by the Spaniards. Long before Linnaeus knew of the plans for Captain Cook's first voyage to the Pacific he may well have wondered about this area on his globe and what such a remote region might yield in the way of living forms. As it turned out, two of his pupils — Daniel Solander and Anders Sparrman — were to sail with Cook and by so doing helped unravel some of nature's secrets on the other side of the world.

At the time of Cook's voyages, as we approach Linnaeus to consider his relations with and expectations of these widest-ranging of his pupils the great teacher is in his fifties, already prematurely aged (Fig. 3). His great botanical contributions — those beginning with the explosion of fundamental works during the years 1735-38 in Holland and culminating in the *Species Plantarum* of 1753 — are finished. But although his principal new discoveries had been published Linnaeus still maintained industrious botanical work. He received innumerable additions to his garden and herbarium and wrote new and essentially augmented editions of *Systema Naturae, Genera Plantarum* and *Species Plantarum,* undertakings that later in his life were taken over by compilers abroad.

Linnaeus's garden in Uppsala (Fig. 4) continued to flourish in the early 1760s, twenty years after its energetic restoration following his appointment in 1741 as one of the two professors of medicine at Uppsala University. After its first glory in the days of Olof Rudbeck the elder, the grand old man of Swedish 17th century science, the garden had long been neglected when Linnaeus took it in hand.

Soon after 1760, however, Linnaeus turned his attention increasingly to his new estate Hammarby in the countryside southeast of Uppsala. The collections were housed there in a special small museum building and gardening was more successful than in the flat, moist plots in the town. His family by this time was fairly grown up. The four daughters were still unmarried and the only surviving son Carl was now in charge as demonstrator in the Uppsala garden, an arrangement that had drawn much criticism. Linnaeus himself did not leave Uppsala any more, except for meetings of the

Fig. 1. The globe in Linnaeus's study (from a colour photo by O. Lindman).
Fig. 2. Detail of the globe (Fig. 1) showing Nova Hollandia and surroundings (from a colour photo by O. Lindman).

Academy of Science in Stockholm and visits to the Royal family and castles near the capital. That, very briefly, is the pattern of those years.

By their journeys his pupils, the apostles, have begun to cover the world and gather its 'spoils' (Fig. 5). Linnaeus's knowledge of the world and of its botany in particular increased substantially as a result of the records and specimens, dried and

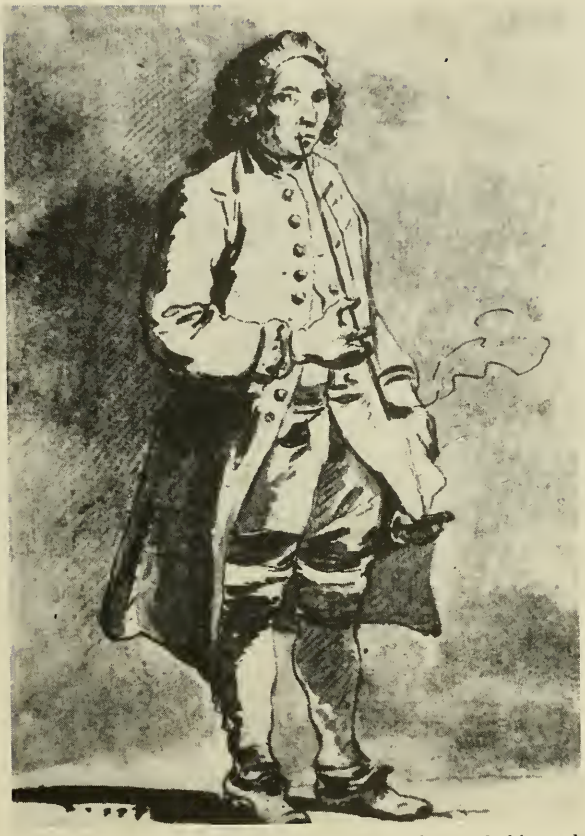


Fig. 3. Linnaeus at the age of 40. From a pencil drawing by J. E. Rehn, probably made 1747.

Fig. 4. The Botanical Garden in Uppsala in the 1740s. From the dissertation *Hortus upsaliensis* (1745).

Fig. 5. The voyages of Linnaeus's apostles. Map compiled by R. E. Fries (Fries, 1951).

living, brought back by the travellers. Yet along with the new-found facts an enthusiastic credulity persisted. Linnaeus could still accept that the tropical and southern regions of the world were populated by strange 'human cousins'. There was, for instance, the *Homo caudatus* — the tail man — from the Nicobar islands in the Gulf of Bengal, and the *Homo troglodytes* the white nocturnal species, blind in daylight, wild and thievish, reported from 'Ethiopia' (i.e. tropical Africa), Java and other places (Fig. 6); both species appear in *Systema Naturae* of 1758.

Linnaeus's view of the southern lands was based largely on knowledge of southernmost Africa, the rest south of the tropic of Capricorn being virtually unknown to him. In the thesis *Flora Capensis* of 1759 details on the flora are mixed with remarks on a strange assemblage of beings between ape and man. 'Semper aliquid novi ex Africa was a much used proverb among the old Romans, and this is still true in our days' he says in the introduction to the thesis and goes on to list troglodytes, sathyres, sylvanes, sphinxes, dianae, hamadryades and cynomolges as well as the hottentot — the most awkward of humans and the most remote of all to be included in the species *Homo sapiens*. 'Africa monstrifera' he calls this place in *Plantae Rariores Africanae* (Linnaeus, 1760), the end of the world where all miracles of nature seem to have been concentrated. One might even discern here his disappointment at not having seen this world. Sparrman tells us there was nothing Linnaeus regretted more in his life than declining the voyage to South Africa offered him during his years in Holland.

What I have said makes it easy to understand Linnaeus's great expectations when he heard from London of the plans for a scientific voyage to the South Seas, to those very areas still empty on the globe in his study. The great news arrived in a letter of 19 August 1768 from John Ellis, the London merchant and outstanding student of corallines and other fields of natural history and Linnaeus's most faithful and intimate correspondent in Britain. 'I must inform you', Ellis begins, 'that Joseph Banks Esquire,

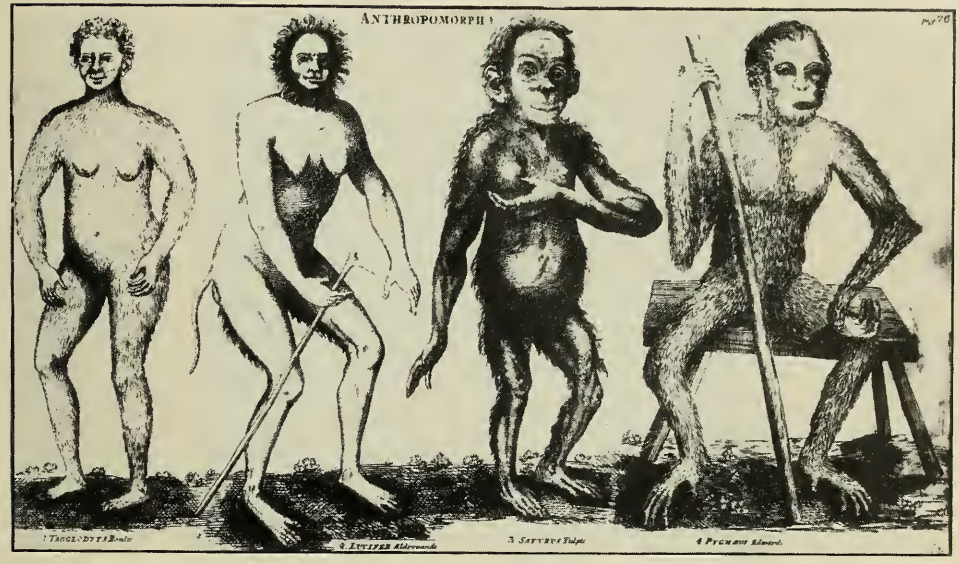


Fig. 6. The 'human cousins', as illustrated in the dissertation *Anthropomorpha* (1760).

a gentleman of £6000 per annum estate, has prevailed on your pupil Dr Solander, to accompany him in the ship that carries the English astronomers to the newly discovered country in the South sea, Lat. about 20° South, and Long. between 130° and 150° West from London. . . . They are to proceed . . . on further discoveries of the great Southern continent. . . . No people ever went to sea better fitted out for the purpose of Natural History, nor more elegantly. . . . In short, Solander assured me this expedition would cost Mr Banks 10 000 pounds'. And as an act of devotion to Linnaeus Ellis added: 'All this thing is owing to you and your writings'. Ellis had taken leave of Banks and Solander three days before writing the letter.

Linnaeus, always sensible, became enthusiastic on receiving the news. The participation of Solander, one of his most intimate pupils, seemed a guarantee that Linnaeus would have a share of the collections. Solander wrote from Rio de Janeiro, where the expedition had landed three months after leaving Britain, explaining that if 'Mr Banks will be in the same spirit as now to complete studies in Natural History, we will together make the voyage to Sweden to ask prof. Linnaeus to order our recruits'. The last was an expression borrowed from Linnaeus himself. This makes it appropriate to consider how relations between Linnaeus and Solander had evolved so far.

Solander (Figs 7, 8), whose origin lay in the north of Sweden, arrived in Uppsala in 1750. Like many before him, he went with quite other academic intentions but became fascinated by Linnaeus's teaching in medicine and natural history. Within a few years he was a favourite of Linnaeus. 'The wittiest pupil I ever had', Linnaeus wrote many years later and, on another occasion, 'I have housed him under my roof, just like a son'. Indeed, Solander in those days was practically one of the family. He accompanied Linnaeus to the Royal castles and collections and joined the family on visits to Dalecarlia, where Linnaeus's father-in-law lived. He was even considered seriously as husband for Linnaeus's eldest daughter. Through his close association with Linnaeus Solander's botanical expertise became impressive. He also gained experience in the field travelling, as the young Linnaeus had done more than twenty years earlier,

Fig. 7. Daniel Solander (1733-1782). After the painting by J. Zoffany, now in the possession of the Linnean Society of London.

in the mountains of Lapland, probably during two summers. Several of Solander's collections from those journeys are preserved in Stockholm (Fig. 9).

Linnaean pupils began to be sought after in the learned world. The British wanted a man to teach them Linnaean method and so when Linnaeus thought Solander mature enough for a trip abroad to enlarge his education — the sort of thing almost obligatory for learned young Swedes in those days — he proposed for him a year or two in Britain. This was surely a sign of great trust in the 26-year-old Solander, whom Linnaeus now apparently hoped to groom as his own successor. Solander was urged to return after not too long a sojourn.

As we know Solander never returned to Sweden. He was immediately and cordially received by Ellis and by Peter Collinson, another merchant and student of natural history, and other Londoners. Solander made friends everywhere — such was his amiable nature — and soon became a well-known figure in society and scientific circles (Fig. 8). 'Throw him where you will — he swims' were Boswell's words about Solander. His combination of modesty and wit, his skill in conversation made a general impression, as so many London reports of those days acknowledge.

Linnaeus long persisted with his own plans for Solander, counting on his return. When he transmitted to Solander an offer of the chair in natural history at the Academy of Science in St Petersburg Linnaeus may well have regarded some years'

Fig. 8. Caricature of Solander, published in London after the return of the *Endeavour*. After the etching dated 1772.

service in the Russian capital as a way of securing Solander's succession to the chair at Uppsala. But Solander's English friends were appalled at the prospect. Collinson warned that tumults and riots, perhaps even a revolution, might occur in Russia, expressing also more rational arguments about the scientific and commercial isolation of a place where Solander would be buried in obscurity. 'No doubt you . . . know persons less eminent but every way qualified in botanic science to teach Russian bears' Collinson protested to Linnaeus in November 1762. The English had no wish to lose the young man who had won their favour.

Eventually, but only after repeated pleas from Linnaeus, Solander replied that he would have accepted the offer with uplifted hands, but on certain conditions. Thereafter his direct correspondence with Linnaeus seems to have ceased until the messages from the *Endeavour*. In 1763 Solander obtained a post at the British Museum. The Swedish scholar Arvid Uggla has concluded that a breach occurred between master and pupil, and for two reasons: first, following a particular grace of the Swedish parliament Linnaeus had his own son nominated as his successor, and second, his eldest daughter had married an officer, Captain Bergencrantz — soon to be a most unhappy marriage. Solander could no longer feel like a son in Linnaeus's household and was more than content to remain in England.

Solander probably made his first acquaintance with finds from the South Seas in

Fig. 9. Gentiana aurea L., collected by Solander at the coast of northern Norway in 1753. Specimen preserved at the Museum of Natural History, Stockholm.

1765, in a collection of 'artifacts' given to the British Museum by Commodore Byron after his circumnavigation on the *Dolphin*. About a year earlier Solander had met Joseph Banks and they had already planned to make a study trip to Linnaeus in Uppsala when Banks's decision to join the *Endeavour* expedition altered everything. Banks made Solander enthusiastic for the voyage with a result that the latter soon

asked: 'Would you like a fellow-traveller?'. 'Someone like you would give me untold treasures and rewards' was Banks's reply, and so the business was settled.

I shall not here describe the course of this voyage, many times told and doubtless well-known in this part of the world. Let us only recall the days 28 April-5 May 1770 when, as William Stearn has said, rarely indeed can so many new and remarkable plants have been collected in so short a time — enthusiastic collecting that made Cook find Botany Bay the most appropriate name for the place. May I also remind you of Solander's curious comparison of the termite mounds of the Endeavour River area with the rune stones of the Uppsala plain, perhaps an understandably nostalgic reaction for a person who for ten years had not seen his native country and now found himself at the antipodes.

Let us now turn back to Linnaeus in Uppsala and his eagerness for news from the expedition. Immediately after the return of the *Endeavour* the faithful Ellis informed Linnaeus that it came laden with the greatest treasures of natural history ever brought into any country at one time by two people. Linnaeus replied within the hour that he had never received a more welcome letter, adding: 'If I were not bound here by 64 years of age, and a worn out body, I would this very day set out for London to see this great hero in botany'. He drew a characteristically bold parallel: 'Moses was not permitted into Palestine, but only to view it from a distance: so I conceive an idea in my mind of the acquisitions and treasures of those who have visited every part of the globe'.

But Ellis also wrote in the same letter to Linnaeus, four days after *Endeavour*'s return: 'as to their Natural History I fear I shall not live to see it. They have sufficient for one thousand folio plates'. Unfortunately these were prophetic words.

Besides Ellis, Linnaeus also obtained information about the expedition and of Solander's activities from two of his pupils, Anders Berlin and Henric Gahn, then in London, but heard nothing from Solander himself. Berlin, soon to meet his destiny in Guinea, estimated that 1200 new plant species and 100 new genera had been taken home. Gahn, later a well-known physician in Stockholm (*Gahnia* (Cyperaceae) was named by Forster in his honour), arrived in London just in time to see the collections and pass on to Linnaeus glimpses, for instance, on the bread fruit tree and about rubber that could be used to erase pencil writing. He presumed Linnaeus would get part of the results but already feared for delays in publication.

Ten months after his return Banks signed a letter, drafted by Solander, for Linnaeus, very polite with many excuses and explanations why the specimens reserved for him had not been despatched. But already Linnaeus had written in alarm to Ellis after learning from Berlin that a new voyage to the South Seas was being planned with Banks and Solander of the company. The report almost deprived Linnaeus of sleep. He foresaw the collections of the first expedition being put aside untouched, thrust in some corner to become perhaps the prey of insects and risk destruction. His attitude to life, so often dark in those years, is revealed in the words: 'I shall be only more and more confirmed in my opinion that the Fates are ever adverse to the greatest undertakings of mankind'. He mentions bitterly that Solander in his letter from Rio de Janeiro had promised to visit Uppsala and it is touching to read of his disappointed hopes for such an occasion: 'If he had brought some specimens with him I could at once have told him what were new; and we might have turned over books together, and he might have been informed or satisfied upon subjects, which after my death will not be so easily explained'.

As we know Banks and Solander never joined Cook's second expedition — they and their equipment could not be accommodated as Banks wished. The ships left Britain with Johann Reinhold and Georg Forster, father and son, as naturalists but at

Fig. 10. Anders Sparrman (1749-1820). Engraving after a drawing by M. Mollard.

Cape Town they were joined by Anders Sparrman (Fig. 10). This pupil of Linnaeus, 16 years younger than Solander but already a far-ranging, observant traveller, is not as generally known as for instance Solander or Thunberg. Sparrman was brave and full of confidence. When only 17-years-old he had travelled to Canton as physician on a Swedish East India ship on which his services, luckily, are said not to have been much needed. His connection with the famous Swedish East India Company captain Carl Gustaf Ekeberg, who owned an estate in Sparrman's home parish, helped in this and the following voyage. Five years later he got the opportunity to go to South Africa as tutor to a Dutch family at False Bay in the Cape Province. There after seven months he met the Forsters and within a few days he was on board the *Resolution* for a 28-month trip in the South Seas (Fig. 11)

Sparrman was a true Linnaean in his curiosity and devotion to his master whose words were law for him and eagerly defended. But he was an unusual Linnaean in his disregard for systematic method and description, at least in published work. His journeys in virgin South Africa, before and after his voyage with Cook, are vividly related with a highly-developed sense for nature and people, in marked contrast to Thunberg's contemporary, exact and thorough narrative. Sparrman must have been an amiable and sociable person. He expresses delight in plant hunting with a fellow Linnaean (Thunberg) on Table Mountain, a venture about which Thunberg has not

Fig. 11. Map of the South Pacific, from Sparrman's *Voyage,* part 2.

a word to tell. Sparrman has only good to say of the Forsters who often came into conflict with other people, not least with Banks and Solander after Cook's return to Britain. There is a touch of credulity and naivety in Sparrman, revealed, for instance, in his diary by a certain parading of his cleverness. An amusing example comes from the turning of *Resolution* at its southernmost position among the icebergs (Fig. 12). On that occasion Sparrman hurried to the stern to claim he had been further south than anyone else in the world. That was at Lat. 71° 10′, a record not broken until 1823 when James Weddell reached a more southerly point.

Sparrman's diary is of outstanding value, both readable and informative, but the section from the South Seas is generally regarded as somewhat inferior to that relating his years in South Africa. The South Seas part was completed only decades after Sparrman's return to Sweden when impressions must have faded and Georg Forster's *Voyage round the World* had aptly told the story. As a scientist Sparrman was principally a zoologist. His observations in Africa show that but in the South Seas he is first of all an ethnographer, describing with accuracy and ingenuity the inhabitants of one island after another. He collected quivers and war clubs, pillows and diadems, altogether about 60 specimens that were presented to the Academy of Science in Stockholm where they can now be seen at the Ethnographical Museum. He was also a

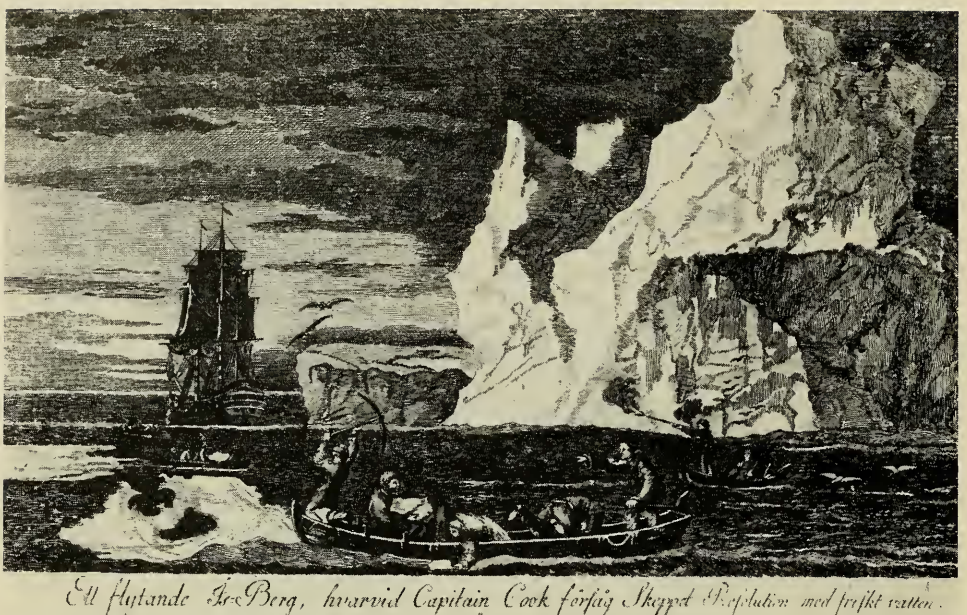


Fig. 12. The icebergs as illustrated by W. Hodges in Sparrman's *Voyage*.

competent, interested botanist who collected quite a lot, now mostly in Stockholm. We note only one example of interest: a gentian from Dusky Bay (Fig. 13), the first place reached by Sparrman in New Zealand, where the virgin temperate forest covered the mountains from top to sea — gentian from the antipodes of that gathered by Solander on the coast of Norway.

The botanical achievements of Cook's second voyage have generally been attributed to the Forsters, to such an extent that in an authoritative work like Merrill's *The Botany of Cook's Voyages* Sparrman's contribution passes unnoticed. His role may never be completely assessed but from diary notes it seems clear the three naturalists formed a team. Johann Reinhold Forster, the father, bears witness to Sparrman's contribution in the preface to his *Characteres Generum Plantarum*: 'Sparrman described the plants and my son depicted them. I devoted my whole time to zoological descriptions. But when Sparrman had more carefully examined the plants, my son and I were often summoned for advice and we discussed together. After that my son compiled the described plants in another volume. I revised it all before the descriptions were again transferred to another volume according to the Linnaean system. And while Sparrman with my son were so occupied, I gathered again new plants and other wealths of Nature so that we should not leave any place with empty hands'.

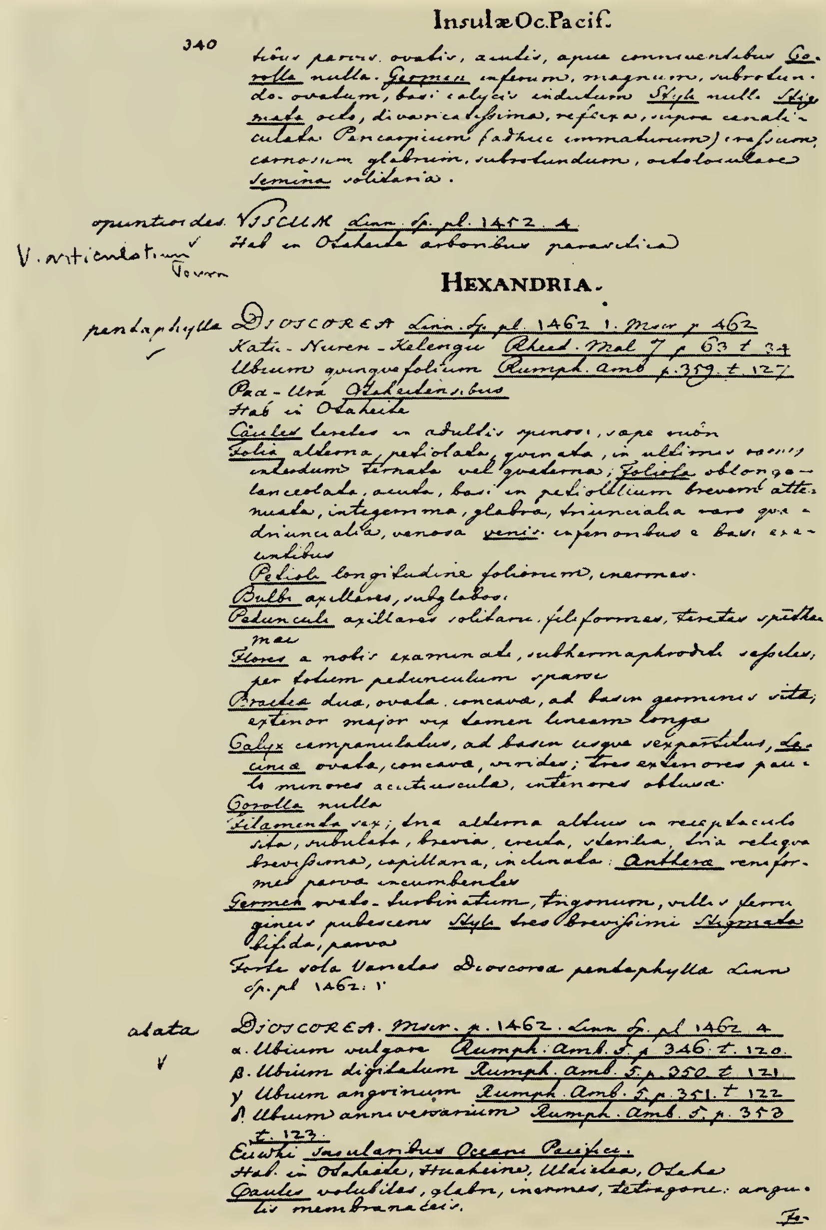
It is significant that Sparrman stands in the background, he never achieved a central position like that gained by both Solander and Thunberg. Eventually at home he was for many years in charge of the collections of the Academy of Science, where his own *ethnographica* seem to have been the most spectacular items; the *naturalia* are said to have been in more or less disorder. Towards the end of the century Sparrman was forced to leave this post and lived his last twenty years as a physician among the lower classes in Stockholm. The appearance, only two years before his death in 1820,

Fig. 13. Gentiana saxosa Forst., collected by Sparrman at Dusky Bay, southern New Zealand, in 1773. Specimen preserved at the Museum of Natural History, Stockholm.

of the final part of Sparrman's narrative from the South Seas marks the last time a voice from the Linnaean era was heard.

With the return to Britain of the *Resolution* in 1775 a new important load of plants from the South Seas was added to that brought back earlier by Banks and Solander. In London Solander now worked as a 'registrator of the world's botany', in a way like Linnaeus himself had done 30 years before. But still he made no communication with his old teacher who repeatedly complained that 'Solander, who may fill hundreds of letters with novelties' kept silent. 'The ungrateful Solander does not send one herb or insect of all that he collected in Insulis australibus novis' Linnaeus wrote in one of his five autobiographies. Solander certainly was hard at work and that 'sedentary and luxurious life' which has been ascribed to him was more a misinterpretation of his seemingly-unhurried manner. He prepared in manuscript many island floras — for Madeira, Tierra de Fuego, Tahiti and New Zealand — with numerous descriptions arranged for the printers (Fig. 14). Others, among them the Australian flora, did not reach that stage. A substantial number of engravings were completed from sketches and paintings (Fig. 15). In a letter to the younger Linnaeus in 1778, the father having died in January of that year, Banks told that 550 plates were then engraved but it would not be possible to include them in a work to be published in the course of the year.

Having received nothing from Banks and Solander, Linnaeus the elder promptly got in touch with the Forsters as soon as he learned of their participation in the second



Insulæ Oc. Pacif.

340 tiores parvas, ovatis, acutis, apice conniventibus Corolla nulla. Germen inferum, magnum, subrotundo-ovatum, basi calycis inductum Styli nulli. Stigmata octo, divaricatissima, reflexa, supra canaliculata. Pericarpium (adhuc immaturum) ovatum, carnosum glabrum, subrotundum, octoloculare. Semina solitaria.

opuntioides VISCUM Linn. Sp. pl. 1452. 4.
V. articulatum ✓ Hab in Otaheite arboribus parasitica

HEXANDRIA.

pentaphylla ✓ DIOSCOREA Linn. Sp. pl. 1462. 1. Mscr p 462
Katu-Nuren-Kelengu Rheed. Mal 7 p 63 t 34
Ubium quinquefolium Rumph. amb p. 359. t. 127
Pea-Ura Otaheitensibus
Hab in Otaheite
Caules teretes in adultis spinosi, saepe ...
Folia alterna, petiolata, quinata, in ultimis ramis interdum ternata vel quaterna; Foliola oblongo-lanceolata, acuta, basi in petiolulum brevem attenuata, integerrima, glabra, triuncialia raro quadriuncialia, venosa venis inferioribus e basi exeuntibus
Petioli longitudine foliorum, inermes.
Bulbi axillares, subglobosi.
Pedunculi axillares solitarii, filiformes, teretes spithamaei
Flores a nobis examinati, subhermaphroditi, sessiles, per totum pedunculum sparsi
Bracteae duae, ovatae, concavae, ad basin germinis sitae; exterior major vix tamen lineam longa
Calyx campanulatus, ad basin usque sexpartitus, Laciniae ovatae, concavae, virides; tres exteriores paulo minores acutiusculae, interiores obtusae.
Corolla nulla
Filamenta sex; tria alterna altius in receptaculo sita, subulata, brevia, erecta, sterilia, tria reliqua brevissima, capillaria, inclinata: Antherae reniformes parvae incumbentes
Germen ovato-turbinatum, trigonum, villis ferrugineis pubescens Styli tres brevissimi Stigmata bifida, parva
Forte sola Varietas Dioscorea pentaphylla Linn Sp. pl 1462: 1

alata ✓ DIOSCOREA. Mscr. p. 1462. Linn Sp. pl 1462. 4
α. Ubium vulgare Rumph. amb. 5. p 346. t. 120.
β. Ubium digitatum Rumph. amb. 5. p. 350. t. 121
γ Ubium anguinum Rumph. amb. 5. p. 351. t 122
δ Ubium anniversarium Rumph. amb. 5. p. 353 t. 123.
Eeuwhi Insularibus Oceani Pacifici.
Hab. in Otaheite, Huaheine, Ulitea, Otaha
Caules volubiles, glabri, inermes, tetragoni: angulis membranaceis.
Fo-

Fig. 14. A page of the manuscript of Solander's unpublished Flora of Tahiti, in the British Museum (Natural History), London.

Cook voyage. Indeed, Linnaeus was to encourage them to publish their results before Banks and Solander. And, as Linnaeus probably calculated, some collections from the Forsters reached him through the agency of his most intimate friend, the Stockholm physician Abraham Bäck. These were the only plants from the South Seas to come under Linnaeus's inspection. As a result the *Supplementum Plantarum*, the

Fig. 15. Banksia integrifolia L.f., collected at Botany Bay, painted by Sydney Parkinson on the *Endeavour* and engraved by Miller in the 1770s. From Britten (1905).

manuscript of which was partly elaborated by the elder Linnaeus and edited and extended by his son, includes a number of new Pacific plant genera and species. The work provoked considerable tension between the Banks-Solander circle and Linnaeus *filius,* exacerbated by disagreement over the botanical application of *Banksia,* a name the older Linnaeus in his first enthusiasm had proposed for the whole continent, *Terra Australis.*

Solander, who knew he might have been in the younger Linnaeus's chair in Uppsala, may have had cause for resentment. But his generous nature took over when Linnaeus *filius* visited London; Solander cordially introduced him into the Banksian circle. During this time, in May 1782, Solander suffered a sudden stroke at breakfast at Banks's house, a hard blow to Linnaeus as well as to the absent host. He died a few days later and what had long been feared now became all too clear. Without Solander the professional botanist, publication of the botany from the voyage could hardly be imagined, the more so since Banks was now deeply involved with official duties.

Solander is unique among Linnaeus's pupils in his influence on botanical science. Yet his published works are remarkably few. Besides being a gifted systematist, as is evident from his flora manuscripts, he was a keen observer of morphology. One example of the latter skill is his observation of the *Eucalyptus* bud with its debated,

Fig. 16. Sparrmannia africana L.f. From Curtis's *Botanical Magazine,* plate 516 (1801).

Fig. 17. Solandra grandiflora Sw. From Curtis's *Botanical Magazine,* plate 1874 (1817).

deciduous cap, for which he suggested an interpretation. In particular he was influential in spreading Linnaean thought and method in Britain, amply realizing the hopes of those who had once begged Linnaeus to send them a pupil.

To this day only a fraction of Solander's work has been published, the main parts

printed being the more than 700 copper engravings of Australian plants with descriptions edited by Britten at the beginning of this century (Fig. 15) and now followed by the magnificent editions of Captain Cook's and Banks's *Florilegia*. But the work was never shut away. The generous access granted by Banks to Solander's material after his death enabled many scientists to profit by and even incorporate many of Solander's results in their own works. Some, like the Forsters, did so without giving fair credit to the source while Solander was still alive, action that led to their being ostracized by the London scientific community. Most, however, paid full credit to the fundamental importance Solander's work had for their own, as Gaertner in his *De Fructibus et Seminibus Plantarum* or Robert Brown in *Prodromus Florae Novae Hollandiae* and other works that marked the break with Linnaean classification. So the diversity and peculiarity of the material collected and described by the influential Linnaean Solander contributed essentially to the adoption of a non-Linnaean system. Solander's influence can thus be traced at various levels which ought to be further analysed.

I will stop here with only a short retrospective epilogue. Linnaeus, Solander and Sparrman were all brought up in provincial Swedish rectories — Linnaeus in Småland in the south, Solander in northern Vestrobothnia and Sparrman in the central province of Uppland. Their fathers were clergymen, their grand- or great grandfathers, on one side or the other, had been peasants. Their links with rural life and knowledge were vital, and particularly obvious for Linnaeus. These three

Fig. 18. Linnaea borealis L. From a copper plate engraved for J. W. Palmstruch: *Svensk Botanik* (1802-1843) and used in Lindman: *Bilder ur Nordens Flora* (Stockholm, 1922).

distinguished men possessed a social and educational background typical of many of those men of learning who made the 18th century in Sweden a brilliant period for science.

Their names live by their achievements and also through the well-known plants named in their honour: *Sparrmannia* L.f. (Fig. 16), the South African tiliaceous genus of many greenhouses, *Solandra* Sw. (Fig. 17), the spectacular member of the Solanaceae from Central and South America, now widely cultivated, and *Linnaea* Gron. (Fig. 18), which Gronovius in Holland dedicated to Linnaeus and to which the latter claimed to find a likeness in himself. Linnaeus's personality may not seem to us to have much in common with this shy, secluded plant of the northern coniferous forests but it has nevertheless become a sort of symbol for Linnaeus and his era.

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